Appendix F

Appendix F
Individual Utility Comparison of Projected Demand and Existing Supply[1]

Note to reader: The graphical analyses presented in this Appendix show projected average and peak day demands, as well as existing supplies for 2000 through 2020. Potential shortfalls are illustrated by demand lines crossing above supply lines. The demand forecasts presented in these graphs are based upon information provided by the individual utilities during the Outlook process and represent many different assumptions about conservation. Individual utilities did not provide estimates of the potential for conservation to reduce their forecast demand. However, it is probable that many of the utilities profiled in this section could reduce their rate of demand growth below what is shown in the graphs by intensifying their investment in conservation.

Relative Utility Size Categories
(Based on Year 2000 Peak Day Demand, in mgd)

 >100

 20-100

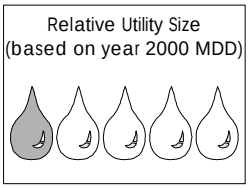
 10-20

 1-10

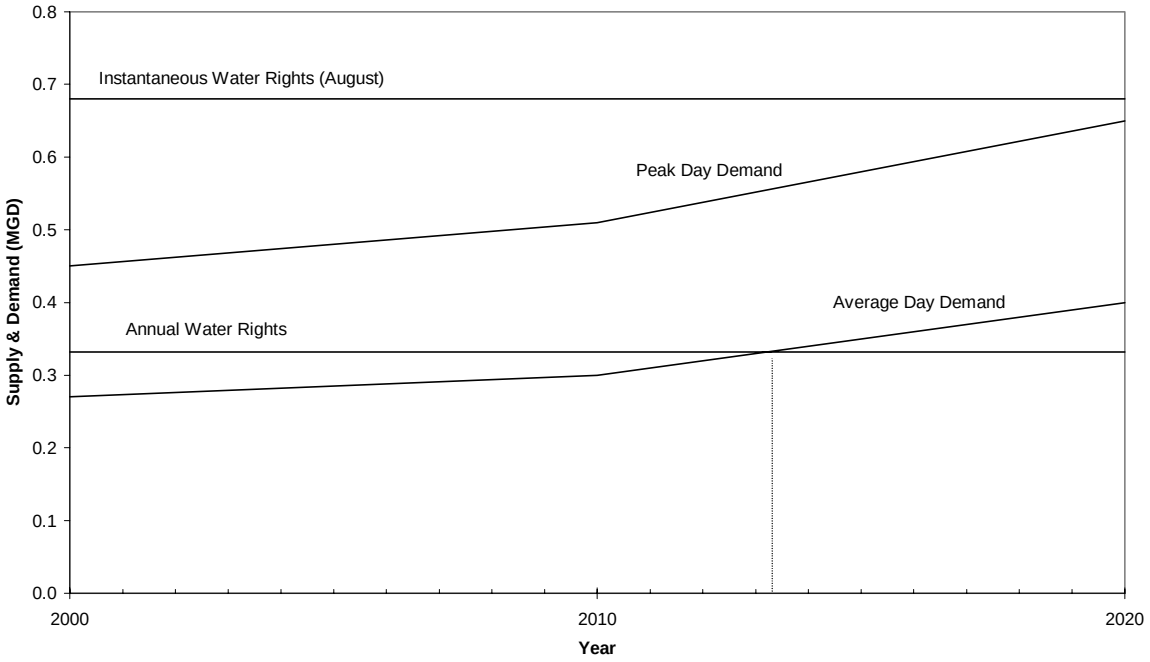
 <1

[1] Source: Central Puget Sound Regional Water Supply Outlook, Technical Memorandum entitled "Comparison of Supply and Demand."

AMES LAKE WATER ASSOCIATION, INC.
EXISTING SUPPLY AND PROJECTED DEMANDS



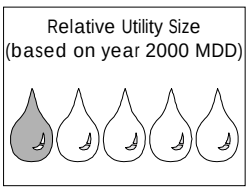
Average Day Demand exceeds Annual Water Rights in 2013.



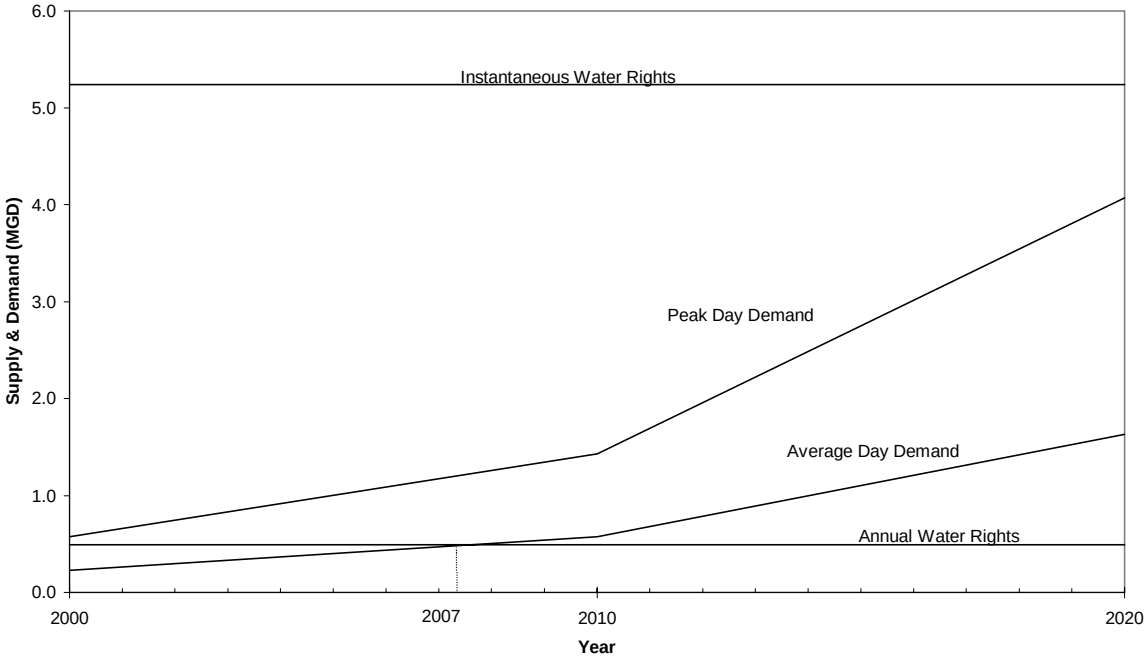
NOTES:
Demand forecasts were provided by the utility.

Existing Supply		
Water Rights	**Average Annual**	**Maximum Instantaneous**
Quantity (mgd)	0.33	0.68
Resource Constraints	**Average Day**	**Peak Day**
Quantity (mgd)		
Description	None Reported	None Reported
Infrastructure Capacity	**Average Day**	**Peak Day**
Quantity (mgd)		
Description	N.A.	None Reported
Type of Supply	Self-Supplied, Ground Water	
Comments	Ames Lake has a variable instantaneous water right. It is 0.49 mgd in all months except July and August. It is 0.79 mgd in July and 0.68 mgd in August. The August water right is most limiting when compared with peak demand, and is therefore shown above.	
Verification Date	January 2000	

BLACK DIAMOND WATER DEPARTMENT
EXISTING SUPPLY AND PROJECTED DEMANDS



Average Day Demand exceeds Annual Water Rights in 2007.

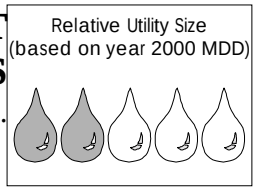


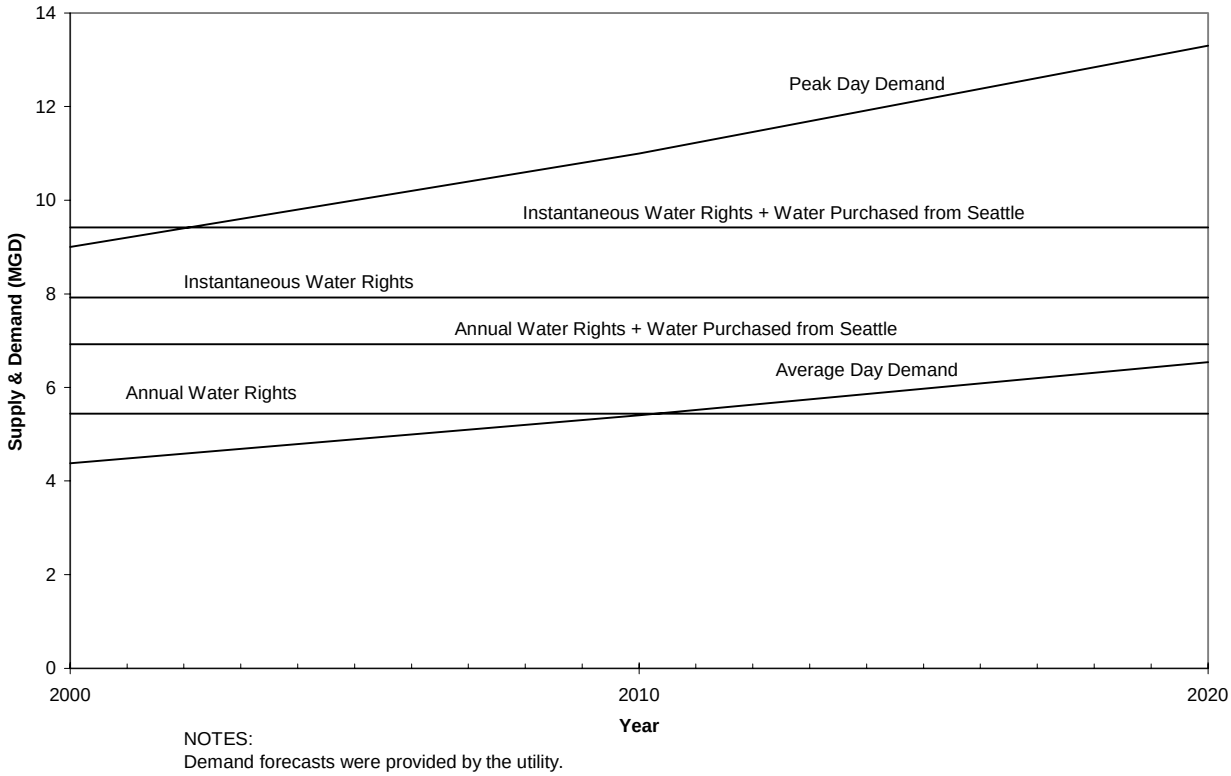
NOTES:
Demand forecasts were provided by the utility.

Existing Supply		
Water Rights	**Average Annual**	**Maximum Instantaneous**
Quantity (mgd)	0.49	5.17
Resource Constraints	**Average Day**	**Peak Day**
Quantity (mgd)		
Description	None Reported	None Reported
Infrastructure Capacity	**Average Day**	**Peak Day**
Quantity (mgd)		
Description	N.A.	None Reported
Type of Supply	Self-Supplied, Spring source	
Comments		
Verification Date	December 2000	

COVINGTON WATER DISTRICT
EXISTING SUPPLY AND PROJECTED DEMANDS

Peak Day Demand exceeds Own Source and Purchased Water in 2002.





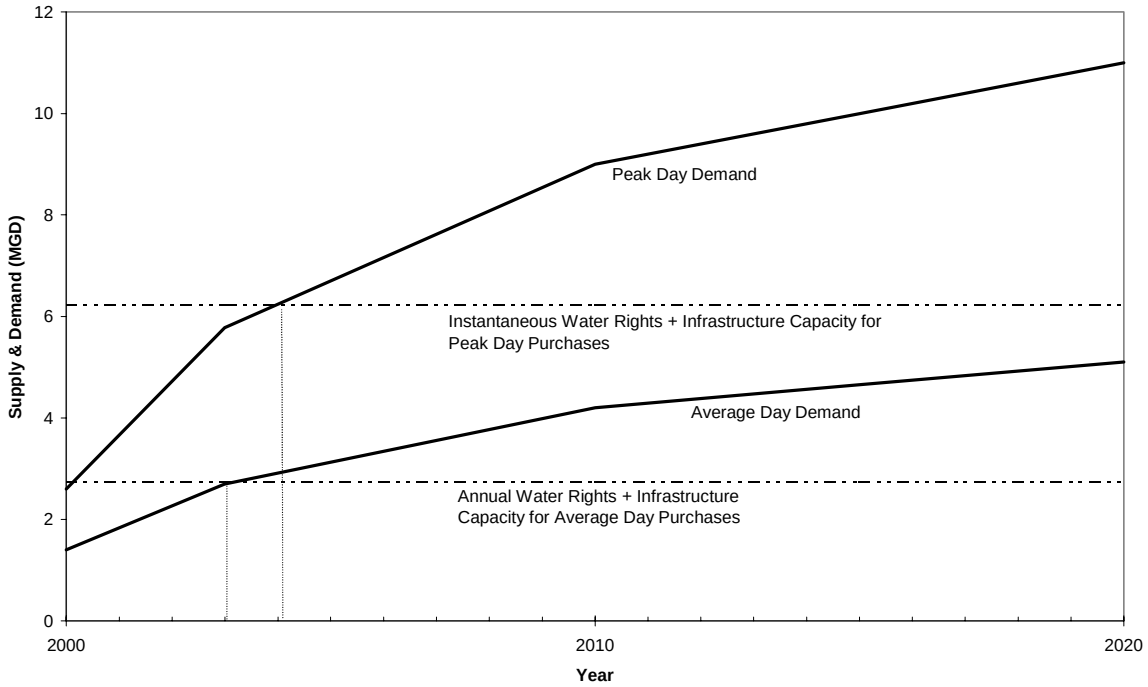
NOTES:
Demand forecasts were provided by the utility.

Existing Supply		
Water Rights	**Average Annual**	**Maximum Instantaneous**
Quantity (mgd)	5.44 (own source)	7.92 (own source)
Resource Constraints	**Average Day**	**Peak Day**
Quantity (mgd)		
Description	None Reported	None Reported
Infrastructure Capacity	**Average Day**	**Peak Day**
Quantity (mgd)		
Description	N.A.	None Reported
Type of Supply	Self-Supplied, Ground Water; Purchased Water from Auburn and Seattle	
Comments	Covington has purchase limitations of 1.5 mgd (annual and peak day) from Seattle and 2.5 mgd (annual and peak day) from Auburn. The supply from Auburn is “interruptible”, and so is not shown in the graph.	
Verification Date	January 2000	

ISSAQUAH WATER SYSTEM
EXISTING SUPPLY AND PROJECTED DEMANDS

Relative Utility Size
(based on year 2000 MDD)

Average Day Demand exceeds Infrastructure Capacity in 2003.

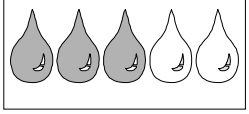


NOTES:
Demand forecasts were provided by the utility.

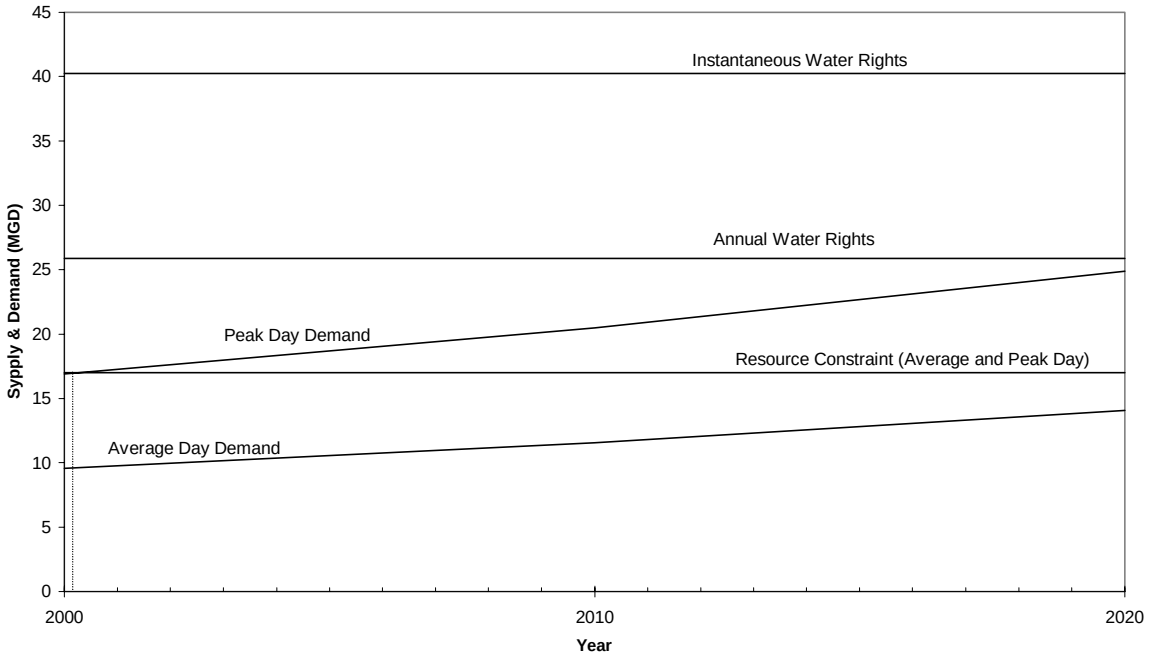
Existing Supply		
Water Rights	**Average Annual**	**Maximum Instantaneous**
Quantity (mgd)	2.5	5.59
Resource Constraints	**Average Day**	**Peak Day**
Quantity (mgd)	NA	NA
Description		
Infrastructure Capacity (for purchases)	**Average Day**	**Peak Day**
Quantity (mgd)	0.25	0.63
Type of Supply	Self Supplied Ground Water and Purchased Water	
Comments	Issaquah has two purchase agreements with the City of Bellevue, but is currently limited by their infrastructure capacity. The first contract serves a small isolated area close to Bellevue and provides approximately 0.25 mgd average day supply and 0.63 mgd peak day supply. Their second contract is for 1.7 mgd average day supply and 4.2 mgd peak day supply and will be obtainable when the new transmission line is completed.	
Verification Date	January 2001	

KENT WATER DEPARTMENT
EXISTING SUPPLY AND PROJECTED DEMANDS

Relative Utility Size
(based on year 2000 MDD)



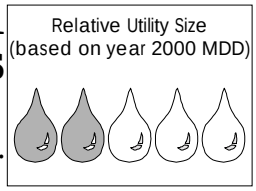
Peak Day Demand exceeds Resource Constraint in 2000.



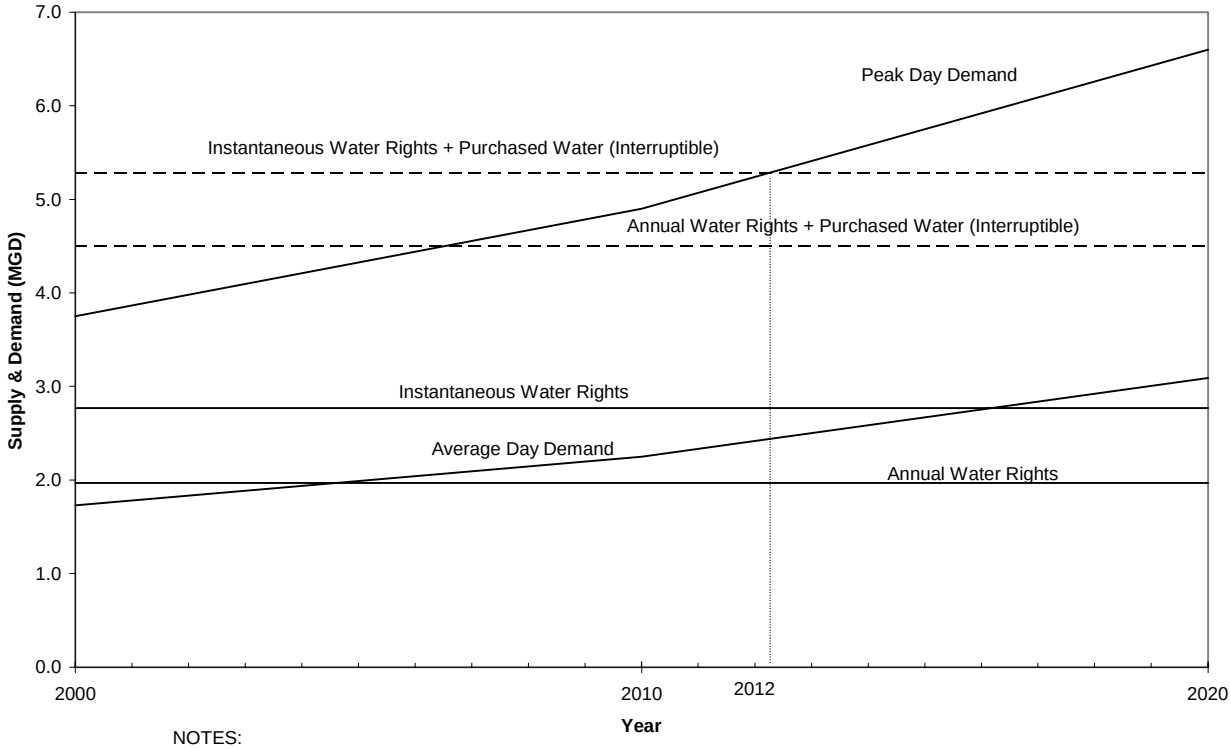
NOTES:
Demand forecasts were provided by the utility.

Existing Supply		
Water Rights	**Average Annual**	**Maximum Instantaneous**
Quantity (mgd)	25.89	40.25
Resource Constraints	**Average Day**	**Peak Day**
Quantity (mgd)	17.0	17.0
Description	Aquifer Yield	In-stream Flow Requirements & Continuity Issues
Infrastructure Capacity	**Average Day**	**Peak Day**
Quantity (mgd)		
Description	N.A.	None Reported
Type of Supply	Self-Supplied, Ground Water	
Comments		
Verification Date	December 2000	

KING COUNTY WATER DISTRICT NO. 111
EXISTING SUPPLY AND PROJECTED DEMANDS



Peak Day Demand exceeds Own Source and Purchased Water in 2012.



NOTES:
Demand forecasts were provided by the utility.

Existing Supply		
Water Rights	**Average Annual**	**Maximum Instantaneous**
Quantity (mgd)	1.97 (own source)	2.77 (own source)
Resource Constraints	**Average Day**	**Peak Day**
Quantity (mgd)		
Description	None Reported	None Reported
Infrastructure Capacity	**Average Day**	**Peak Day**
Quantity (mgd)		
Description	N.A.	None Reported
Type of Supply	Self-Supplied, Ground Water; Purchased Water from Auburn	
Comments	Purchases from Auburn are interruptible and are limited to 2.5 mgd (average and peak day).	
Verification Date	December 2000	

CITY OF NORTH BEND
EXISTING SUPPLY AND PROJECTED DEMANDS

Relative Utility Size
(based on year 2000 MDD)

Average Day Demand exceeds Annual Water Rights before 2000.

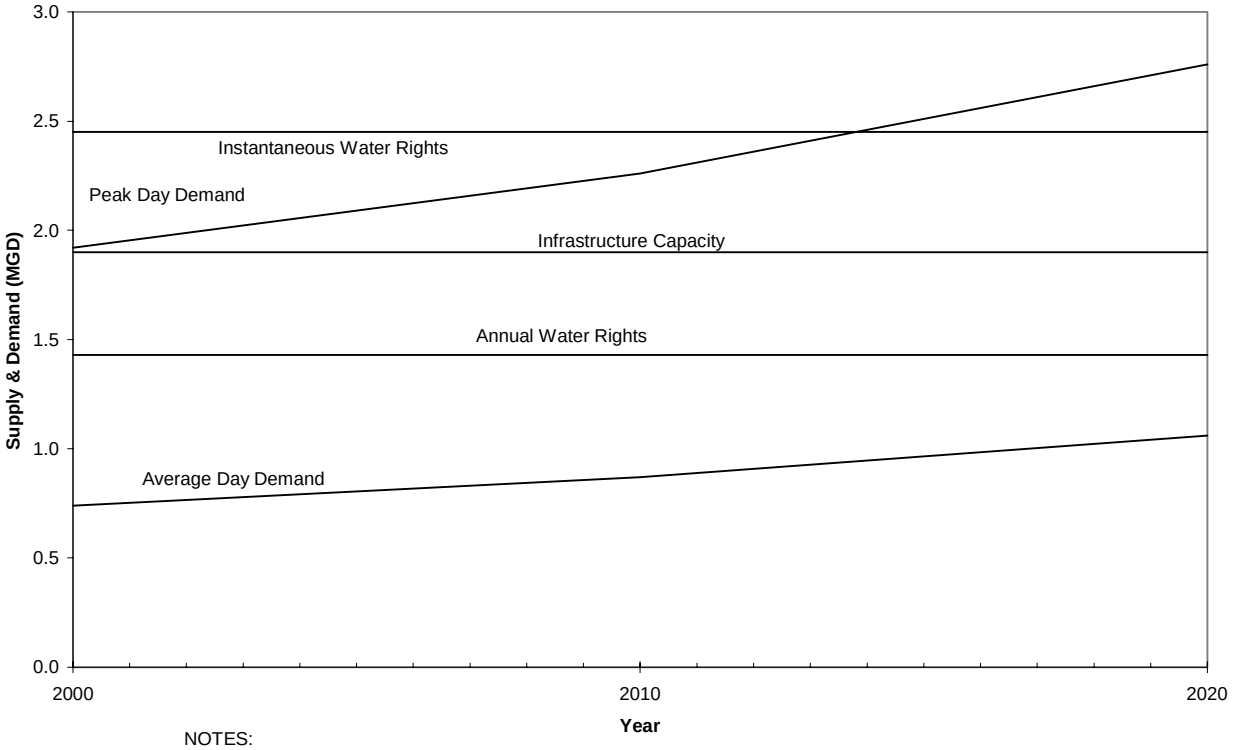
NOTES:
Demand forecasts were provided by the utility.

Existing Supply		
Water Rights	**Average Annual**	**Maximum Instantaneous**
Quantity (mgd)	0.30	3.23
Resource Constraints	**Average Day**	**Peak Day**
Quantity (mgd)		
Description	None Reported	None Reported
Infrastructure Capacity	**Average Day**	**Peak Day**
Quantity (mgd)		
Description	N.A.	None Reported
Type of Supply	Self-Supplied, Ground Water	
Comments		
Verification Date	December 2000	

CITY OF PACIFIC
EXISTING SUPPLY AND PROJECTED DEMANDS

Relative Utility Size
(based on year 2000 MDD)

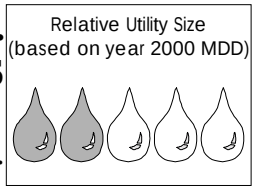
Peak Day Demand exceeds Instantaneous Water Rights prior to 2000.



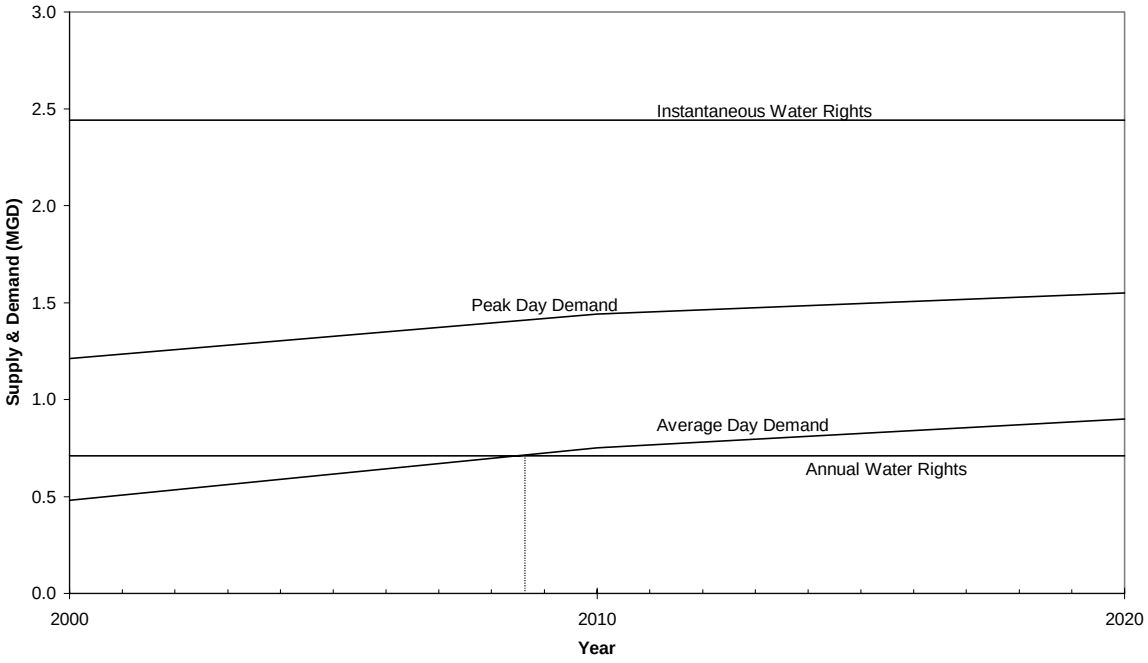
NOTES:
Demand forecasts were provided by the utility.

Existing Supply		
Water Rights	**Average Annual**	**Maximum Instantaneous**
Quantity (mgd)	1.43	2.45
Resource Constraints	**Average Day**	**Peak Day**
Quantity (mgd)		
Description	None Reported	None Reported
Infrastructure Capacity	**Average Day**	**Peak Day**
Quantity (mgd)		1.9
Description	N.A.	
Type of Supply	Self-Supplied, Ground Water	
Comments	Pacific currently purchases water from Auburn on an emergency basis to cover current shortfalls. Pacific also supplies water to the Webstone Water District, in Pierce County.	
Verification Date	December 2000	

SALLAL WATER ASSOCIATION, INC.
EXISTING SUPPLY AND PROJECTED DEMANDS



Average Day Demand exceeds Annual Water Rights in 2008.

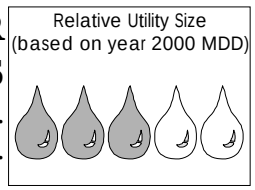


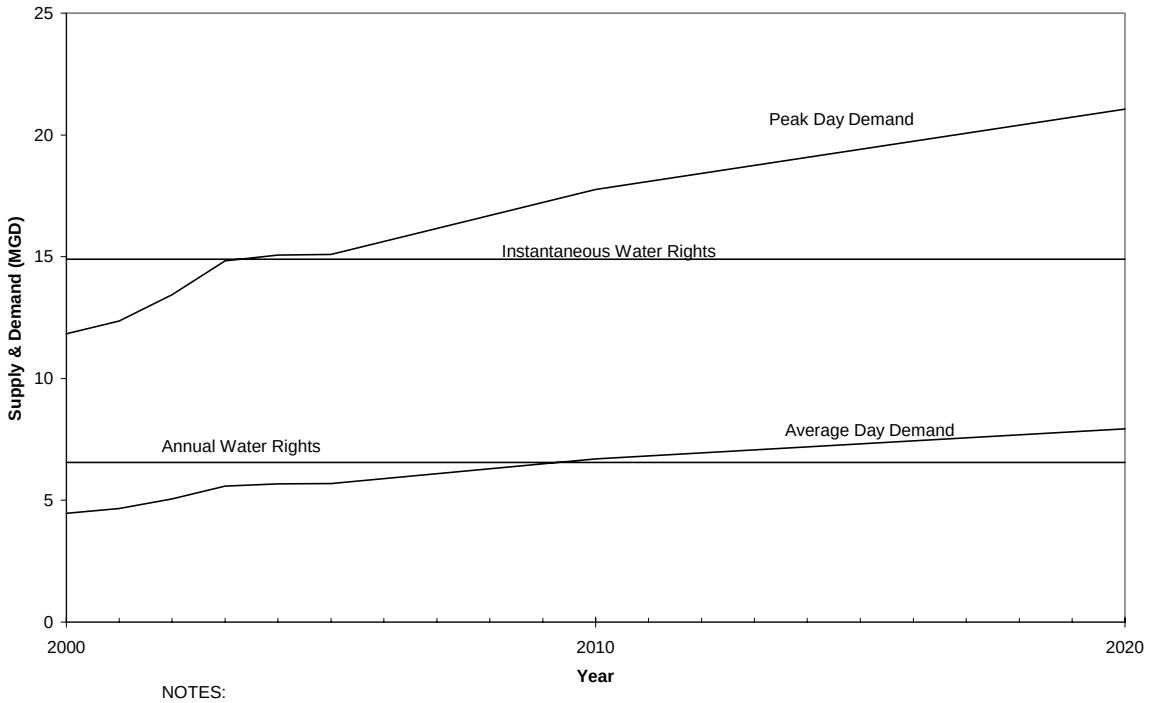
NOTES:
Demand forecasts were provided by the utility.

Existing Supply		
Water Rights	**Average Annual**	**Maximum Instantaneous**
Quantity (mgd)	0.71	2.44
Resource Constraints	**Average Day**	**Peak Day**
Quantity (mgd)		
Description	None Reported	None Reported
Infrastructure Capacity	**Average Day**	**Peak Day**
Quantity (mgd)		
Description	N.A.	None Reported
Type of Supply	Self-Supplied, Ground Water	
Comments	A potential new water right of 0.067 mgd average day supply between 2004 and 2006 was reported in 1999 by the utility. However, verification of this potential future supply option was not available for this technical memorandum.	
Verification Date	January 2000	

SAMMAMISH PLATEAU WATER & SEWER
EXISTING SUPPLY AND PROJECTED DEMANDS

Average Day Demand exceeds Annual Water Rights in 2007[a].
Peak Day Demand exceeds Instantaneous Water Rights in 2002[a].





NOTES:
Demand forecasts were provided by the utility.

Existing Supply		
Water Rights	**Average Annual**	**Maximum Instantaneous**
Quantity (mgd)	6.56	14.9
Resource Constraints	**Average Day**	**Peak Day**
Quantity (mgd)		
Description	None Reported	None Reported
Infrastructure Capacity	**Average Day**	**Peak Day**
Quantity (mgd)		14.9
Description	N.A.	
Type of Supply	Self-Supplied, Ground Water	
Comments	[a] The District is hydraulically split into 2 separate zones (Plateau & Cascade Zones) and are analyzed separately in the District's Comprehensive Plan (Plan), although shown together in aggregate on the above graph. In the Plan, the Plateau Zone is identified as having average day demands (with conservation) that exceed available supplies in 2007 and peak day demands that exceed available supplies in 2002. Average day demands in the Cascade Zone are shown to be adequate through 2020, while peak day demands exceed available supplies in 2008.	
Verification Date	December 2000	